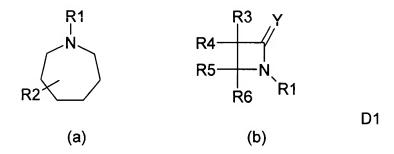
#### WHAT IS CLAIMED IS:

## 1. Compounds of the general formulae D1



#### wherein

- all substituted and unsubstituted, condensed and non-condensed homocyclic and heterocyclic basic structures having more than six members in the ring
   (a) as well as having less than five members in the ring
   (a) are represented;
- the basic structures may contain double bonds;
- Y represents O, S or NR4;
- R2 symbolizes the substitution of the cyclic basic structure in (a) and may represent one or several substituents;
- R1 to R6 may be identical or different and are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydr-oxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino; and
- the heteroaromatic or heterocyclic residues are bound to the basic structure of the general formula D1 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D1 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof, for a use in the medical field.

2. The compounds of the general formula D1 according to claim 1 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D1 according to Table 1, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 1:

Compound ID.	Structure
D1.001	Me O Me H N N NMe <sub>2</sub>
D1.002	O N N N N N N N N N N N N N N N N N N N

D1.003	NO NO
D1.004	H <sub>3</sub> C O

# 3. Compounds of the general formula D2

### wherein

- Y1 and Y2 may be identical or different and represent O, S or NR3;
- R1 to R4 may be identical or different and are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydr-oxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyloptionally containing one or several hetero at-

oms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino; and

 the heteroaromatic or heterocyclic residues are bound to the basic structure of the general formula D2 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D2 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof, for a use in the medical field.

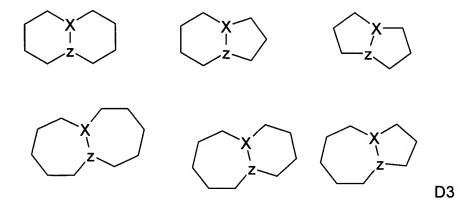
4. The compounds of the general formula D2 according to claim 3 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D2 according to Table 2, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 2:

Compound	Structure
ID.	
D2.001	H <sub>3</sub> C N N N N N N N N N N N N N N

D2.003	N. N. W.
D2.004	Me NH <sub>2</sub>
	S N F  N-N  O  N-N  O  CI
D2.005	
D2.006	EtO O NH <sub>2</sub> OEt
D2.007	H N O OEt
D2.008	O N-N CI

## 5. Compounds of the general formulae D3



### wherein

- X and Z independent of each other represent CH, CR3 or N;
- the partial rings may be substituted or unsubstituted, condensed or noncondensed and may contain zero to three double bonds and zero to four hetero atoms and herero atom-containing groups according to the definitionsfor X and Z;
- R1 to R4 may be identical or different and are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydr-oxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino; and
- the heteroaromatic or heterocyclic residues are bound to the basic structure of the general formula D2 via a C atom or a hetero atom; the ring systems of the basic structures may contain zero to three double bonds;

and tautomers, stereoisomers of the compounds of the general formula D3 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoiso-mers thereof, for a use in the medical field.

6. The compounds of the general formula D3 according to claim 5 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D3 according to Table 3, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 3:

Compound	Structure
ID.	
D3.001	H <sub>3</sub> C N N N N N N N N N N N N N N N N N N N
D3.002	H <sub>3</sub> C NH
D3.003	N N N N N N N N N N N N N N N N N N N

D3.004	O N N N N N CI
D3.005	H <sub>3</sub> C CH <sub>3</sub> NH  O CH <sub>3</sub>
D3.006	N.N.N.N.
D3.007	S N S Br
D3.008	

D3.009	
D3.010	
D3.011	
D3.012	
D3.013	

D3.014	O=N, O O O O O O O O O O O O O O O O O O O
D3.015	N-N N N= Br
D3.016	Br O Br
D3.017	O N O
D3.018	
D3.019	S N O
D3.020	

D3.021	O-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N
D3.022	H <sub>3</sub> C N N N N N N CI
D3.023	
D3.024	

D3.025	H <sub>3</sub> C O O O O O O O O O O O O O O O O O O O
D3.026	N Q
D3.027	
D3.029	

D3.030	$\triangle_{p}$
	O N.
	N N
D3.031	0-
D3.032	
D3.033	
	N O N N
D3.034	X
	0
D3.035	
	N N
	N N
	III N

D3.037	H <sub>3</sub> C N N N N N N CH <sub>3</sub>
D3.038	N O F F F F F F F F F F F F F F F F F F
D3.039	
D3.040	H <sub>3</sub> C O O N CH <sub>3</sub>
D3.042	N S

D3.043	S N-N F
D3.044	
D3.045	\$\frac{1}{N} \frac{1}{N} \frac
D3.046	
D3.047	
D3.048	

D3.049	N O F F F F F F F F F F F F F F F F F F
D3.050	O N S N N N N N N N N N N N N N N N N N
D3.051	
D3.052	
D3.054	H <sub>3</sub> C N N N CH <sub>3</sub>

D3.055	O N CI CI CI
D3.056	NH-//N NH-//N NH-//N NH-//N
D3.057	N N N N
D3.058	O N N N N H
D3.059	
D3.060	0-N

D3.061	
D3.062	O H N N
D3.063	
D3.064	
D3.066	
D3.067	

D3.069	
D3.070	o v
D3.072	
D3.073	
D3.074	N-Q
D3.077	Q Q

D3.078	
D3.079	
D3.080	N F F F F F F F F F F F F F F F F F F F
D3.081	N N O O Br
D3.082	O CI
D3.083	
D3.084	

D3.086	H <sub>3</sub> C H <sub>N</sub> CH <sub>3</sub> CH <sub>3</sub> NH O
D3.087	
D3.088	
D3.089	O N N N H OH

D3.091	O N N N CI
D3.092	N S N F F F
D3.093	CI N S
D3.094	
D3.095	

D3.096	N O NO-
	N C C
D3.097	O=N+ N-N
D3.098	
D3.099	
D3.100	N N N N N N N N N N N N N N N N N N N
D3.101	CI N N N N

S N S
N N N N N N N N N N N N N N N N N N N
0
N o Nie o
o"s"o
N N N N
0 0

D3.108	
D3.109	
D3.110	
D3.111	

D3.112	CI
D3.113	
D3.114	
D3.116	

D3.117	
D3.118	NH <sub>2</sub> N S O S O N NH <sub>2</sub>
D3.119	
D3.120	CI N N

7. Compounds of the general formula D4

R11-R12 D4

#### wherein

- R11 and R12 represent heterocyclic systems having three to eight ring members, which may be connected to each other directly via the hetero atoms, via carbon atoms or a hetero atom or a carbon atom;
- the partial rings indicated by R1 and R2 may be substituted or unsubstituted, condensed or noncondensed and may contain zero to three double bonds and further hetero atoms and hetero atom-containing groups;
- and tautomers, stereoisomers of the compounds of the general formula D4 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof, for a use in the medical field.
- 8. The compounds of the general formula D4 according to claim 7 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D4 according to Table 4, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

# Table 4:

Compound	Structure
ID.	
D4.001	H <sub>3</sub> C NH NH NH <sub>3</sub> C O
D4.002	H <sub>3</sub> C NH
D4.003	
D4.004	
D4.005	

D4.006	
D4.007	
D4.008	N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.
D4.009	
D4.010	

D4.011	0 × s
	CI
	CI
D4.012	
	_N
D4.013	
	N N
	N N N N
D4.014	
	s ,
D4.015	0 \$
	°
D4.016	0 <sub>N</sub> .0
	N—CI

D4.017	
D4.018	
D4.019	
D4.020	
D4.021	

D4.022	CI
D4.023	
D4.024	H <sub>3</sub> C O CH <sub>3</sub>
D4.025	
D4.026	N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-

D4.027	N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-
D4.028	
D4.030	O=\$=O
D4.031	
D4.032	

D4.034	`o
D4.035	
D4.036	
D4.037	
D4.038	H <sub>3</sub> C O N N N HN O CI

D4.039	NH O
D4.040	O N-N
D4.041	S CI CH <sub>3</sub>
D4.042	
D4.044	

D4.045	
D4.046	
D4.047	S N CI
D4.048	
D4.049	H <sub>3</sub> C H <sub>3</sub> C N O O O O O O O O O O O O O O O O O O

D4.050	ON S N S N S N S N S N S N S N S N S N S
D4.051	
D4.052	CI CI CI
D4.053	N N N
D4.054	

D4.055	
D4.056	O O O O O O O O O O O O O O O O O O O
D4.057	
D4.058	H <sub>3</sub> C N N N
D4.059	CI

D4.060	
D4.061	
D4.062	
D4.063	
D4.064	

D4.065	
D4.066	
D4.067	N-Q
D4.068	
D4.069	CI N

D4.070	
D4.071	
D4.072	
D4.073	
D4.074	

D4.075	CI CI CI O
D4.076	
D4.077	O N O N O O
D4.078	
D4.079	

D4.080	N III
	Br—ON
54.004	0
D4.081	CI
D4.082	
D4.083	
D4.000	CI
D4.084	

D4.085	N N
D4.000	- F
D4.086	
D4.087	N CI CI
D4.088	O_N_O
D4.089	
D4.090	0.N.O.
D4.091	CI N S

D4.092	
D4.093	
D4.095	
D4.096	N——Br OBr
D4.098	Br O

D4.099	/
	s N s
	11
D4.100	S
	O NO
	F
	F
D4.101	0 0
201	O N.
	0 N=0
D4.102	O≈N+O_ Ö
	N N
	`0
D4.103	
	N N N N
	ö
	0,

D4.104	NH <sub>2</sub>
	$H_3C$
	H <sub>3</sub> C
D4.105	
D4.106	
D4.107	N N N N N N N N N N N N N N N N N N N
D4.110	
D4.111	CI NO

D4.112	
D4.113	
D4.114	
D4.115	

D4.116	
D4.117	
D4.118	

# 9. Compounds of the general formula D5

## wherein

- X may represent O, S, NH, NR2;
- the residues R1 symbolize the substitution of the basic six-membered ring structure;
- the basic heterocyclic structure may possess zero to three double bonds and up to three further hetero atoms from the group X;

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- R1 and R2 are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino;
- the heteroaromatic or heterocyclic residues are bound to the basic structure of the general formula D5 via a C atom or a hetero atom;
- and tautomers, stereoisomers of the compounds of the general formula D5 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof, for a use in the medical field.
- 10. The compounds of the general formula D5 according to claim 9 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D5 according to Table 5, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 5:

Compound ID.	Structure
D5.001	H <sub>3</sub> C N NH NH NH

DE 002	
D5.002	H <sub>3</sub> C N
	N N N
	N N
D5.003	0 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
D5.005	ş
	Ó
	0, 0
D5.004	° s
	) O. A. N. J
	Ö
D5 005	
D5.005	H <sub>3</sub> C CH <sub>3</sub>
	X
	ŅΗ
	H <sub>3</sub> C
	0
	/o
	H <sub>3</sub> C
D5.000	
D5.006	°× ş
	CI
	cı cı

D5.007	0
	N O CI
D5.008	
D5.009	
D5.010	o s
D5.011	

D5.013	
D5.014	
D5.015	O = S - N
D5.016	

D5.017	
D5.018	
D5.019	
D5.020	H <sub>3</sub> C O CH <sub>3</sub>
D5.021	CF <sub>3</sub>

D5.022	S CI CH <sub>3</sub>
D5.023	
D5.024	
D5.025	S N F
D5.026	

D5.027	S
	o N O
	CI
	CI
D5.028	0~
	N N N N N N N N N N N N N N N N N N N
	N N:
	0-1-0 Nico
D5.029	O CH3
D0.020	N N
	9
	H <sub>3</sub> C H <sub>3</sub> C
	N O
	0=
D5.030	
	N N N N N N N N N N N N N N N N N N N
-	
D5.031	CI
	$\sim \sim $
	N NO
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D5.032	O N N N N N N N N N N N N N N N N N N N
D5.033	
D5.034	H <sub>3</sub> C NH
D5.035	

D5.036	
D5.037	
D5.038	
D5.039	
D5.040	

D5.041	/
20.011	0 0
	N F
	F F
D5.042	CI CI CI O
	CITY
	s ci
	cı Ç
D5.043	\ ,0
	jv—⟨
	N NH
	N N NO
	, N
	F NH
D5.044	0
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D5.045	0>
	l N
	N N
	n o Nico
	ON
	<u> </u>

D5.046	S O
D5.047	O_N_O
D5.048	
D5.050	S O N O F
D5.051	

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D5.052	
D5.053	CI O'S'O

# 11. Compounds of the general formula D6

## wherein

- X may represent O, S, NH or NR9;
- the basic five-membered ring structure may additionally contain up to three further hetero atoms in accordance with the definition of X, which may be identical or different;
- the basic five-membered ring structure may contain zero to two double bonds;
- R1 to R9 are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, un-

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substituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino; and

 the heteroaromatic or heterocyclic residues are bound to the basic structure of the general formula D6 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D6 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoiso-mers thereof, for a use in the medical field.

12. The compounds of the general formula D6 according to claim 11 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D6 according to Table 6, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 6:

Compound	Structure
ID.	
D6.001	H <sub>3</sub> C N NH NH H <sub>3</sub> C O

D6.002	H <sub>3</sub> C NH NH
D6.003	
D6.004	
D6.006	O N N N N CI
D6.007	H S S

D6.008	
D6.009	
D6.010	
D6.011	

D6.012	
D6.013	
D6.014	0; N - CI
D6.015	
D6.016	H <sub>3</sub> C N S O NH <sub>2</sub> O Br

D6.017	
D6.018	N O
D6.019	
D6.020	0=5=0
D6.021	ON N Br
D6.022	N.N.

D6.023	CI
D6.024	
D6 025	
D6.025	
D6.026	O O O N N N N N N N N N N N N N N N N N
D6.027	

D6.028	0,
	H <sub>3</sub> C CH <sub>3</sub>
	O N N N
D6.029	
D0 000	
D6.030	0 N
	o'N' o'Nio
D6.031	
	s s
	N N N
D6 022	`o—
D6.032	
	N-N-N-N-O
	F

D6.033	\
	N-
D6.034	N→°
	O N F F
D6.035	4
	N. N.
	o N
	~ 0
D6.036	O'N'N'N'N'N'N'N'N'N'N'N'N'N'N'N'N'N'N'N
	~
D6.037	
	S N
	s o
D6.038	0 N N N

D6.039	S N N N N Br
D6.040	
D6.041	
D6.042	N O
D6.043	ONN N N N CI

D6.044	
D6.045	
	N-N N-N
D6.046	
D6.047	No F F
	S F F
D6.048	()s (
	o's N
D6.049	s-4°
	N CI
	'

D6.050	
	Me NH <sub>2</sub>
D6.051	
D6.052	
D6.053	S N O
D6.054	
D6.055	

D6.056	H <sub>3</sub> C H <sub>3</sub> C N O N O N O N O N O N O N O N O N O N
D6.057	N S N H
D6.058	N O F F F F F F F F F F F F F F F F F F
D6.059	O N S N S N S N S N S N S N S N S N S N
D6.060	

D6.061	O CI CI CI
D6.062	H <sub>3</sub> C O N O N O N O N O N O N O N O N O N O
D6.063	H <sub>3</sub> C N NH NH CI
D6.064	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$

D6.065	CI N
D6.066	S S O N
D6.067	
D6.068	
D6.069	H <sub>3</sub> C NH

D6.070	ij
	CI—NO
D6.071	,CI
	CI O N O N
D6.072	
	ON SO
D6.073	S O O
D6.074	
	N-N N=0
D6.075	

O N N
O. N. O.
4_
N N N N N N N N N N N N N N N N N N N
F.
ON N=OO
<u></u>
N N N
CI

D6.081	
D6.082	
D6.083	N O F F F F F F F F F F F F F F F F F F
D6.084	N-N-N-
D6.085	
D6.086	

D6.087	
D6.088	
D6.089	Br—OOOO
D6.090	

D6.091	
D6.092	CI C
D6.094	
D6.095	CI CI
D6.096	O N N N OH OH

D6.097	
	`o-\
	N.N N N
	Ö
	<u>_</u>
D6.098	0-
	CI CI
	Ň
D6.099	
	Br O N-
	0
D6.100	
	N N
D6.101	O <sub>2</sub> N
	N CI
	CI
D6.102	
	0=
	, N-N
	N

D6.103	N S O F F
D6.105	0.N-0- N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N
D6.106	CI N S
D6.107	N N N O O Br
D6.108	

D6.110	
D6.111	N O N O O O O O O O O O O O O O O O O O
D6.112	O Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z
D6.113	
D6.114	CI CI S N

D6.115	Br O
D6.116	
D6.117	
D6.118	N N N N N N N N N N N N N N N N N N N
D6.119	S N S Br

D6.120	
	N N N N
D6.121	0,50
D6.122	OCO
D6.123	
D6.124	
D6.125	N N N N N N N N N N N N N N N N N N N

D6.126	
	N N N N N N N N N N N N N N N N N N N
D6.127	N-o-
	Br N N N N N N N N N N N N N N N N N N N
D6.129	N.N.
D6.130	
D6.131	
	CI

D6.132	NH <sub>2</sub> N S O S N NH <sub>2</sub>
D6.133	
D6.134	
D6.135	S N N S

## 13. Compounds of the general formulae D7

### wherein

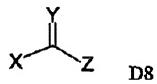
- Y1 and Y2 may be identical or different and may represent O, S, NH or NR4;
- the aromatic systems of the basic structures may contain up to four substituents, which may be identical or different;
- R1 to R4 are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino; and
- the heteroaromatic or heterocyclic residues are bound to the basic structure having the general formula D7 via a C atom or a hetero atom;
- R2 and R3 symbolize the substitution of the respective rings systems and represent one to four residues;
- and tautomers, stereoisomers of the compounds of the general formula D6 and pharmaceutically acceptable salts, salz derivatives, tautomers and stereoisomers thereof, for a use in the medical field.

14. The compounds of the general formula D7 according to claim 13 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D7 according to Table 7, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 7:

Compound	Structure
ID.	
D7.001	O <sub>2</sub> N
D7.003	So o o o o o o o o o o o o o o o o o o

## 15. Compounds of the general formula D8



## wherein

• X and Z may be identical or different and independent of each other are selected from the group consisting of hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub>

alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S and amino (NH2, NHR1, NR1R2);

- Y represents O, S or NR3;
- R1, R2 and R3 may be identical or different and are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino; and
- the heteroaromatic or heterocyclic residues are bound to the basic structure having the general formula D8 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D8 and pharmaceutically acceptable salts, salz derivatives, tautomers and stereoisomers thereof, for a use in the medical field.

16. The compounds of the general formula D8 according to claim 15 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D8 according to Table 8, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

# Table 8:

Compound	Structure
ID.	
D8.001	H <sub>3</sub> C NH NH NH <sub>3</sub> C O
D8.002	H <sub>3</sub> C NH
D8.003	O N CI
D8.004	NH NH S

D8.005	N-N N N= Br
D8.006	
D8.007	
D8.008	O O O N N N N N N N N N N N N N N N N N
D8.009	

D8.010	H <sub>3</sub> C CH <sub>3</sub>
D8.011	
D8.012	H <sub>3</sub> C O O O O O O O O O O O O O O O O O O O
D8.013	O N N N N N CI

D8.014	
D8.015	S N CI
D8.016	S N F  N-N  O  O  CI
D8.017	F O O O F NH
D8.018	

D8.019	O N S
D8.020	
D8.021	N N N N
D8.022	H <sub>3</sub> C N NH NH CI
D8.023	$\begin{array}{c c} -O & N & N \\ \hline & N & N \\ & N & N \\ & N $

D8.024	
D8.025	O-P=O NH <sub>2</sub> HN Br
D8.026	H <sub>3</sub> C NH
D8.027	N N N N N N N N N N N N N N N N N N N

D8.028	O N N N N N N N N N N N N N N N N N N N
D8.029	
D8.030	OH OH OH OH OH
D8.031	N <sup>+</sup> O N
D8.032	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$

D8.033	
D8.034	
D8.035	
D8.037	
D8.038	

17. Compounds of the general formulae D9

#### wherein

- Z may represent S or P;
- Y1 and Y2 may represent O, S, NH, NR4 or NR5;
- R1 to R5 are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino;
- the heteroaromatic or heterocyclic residues are bound to the basic structure having the general formula D9 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D9 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof, for a use in the medical field.

18. The compounds of the general formula D9 according to claim 17 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D9 according to Table 9, and tautomers, stereoisomers of

said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 9:

Compound	Structure
ID.	
D9.001	N N N CI
D9.002	S P O S
D9.003	O O O O O O O O O O O O O O O O O O O
D9.004	S O O O O O O O O O O O O O O O O O O O
D9.005	S N F  N-N  O  CI

D9.006	S:0
D9.007	O=S=O N N O NH <sub>2</sub>
D9.008	
	O-P=O N NH <sub>2</sub> NH <sub>2</sub> HN Br
D9.010	Br O N S N S N S N S N S N S N S N S N S N
D9.011	

D9.012	NH <sub>2</sub> N S O S O N NH <sub>2</sub>
D9.013	
D9.014	OH OH
D9.015	CH <sub>3</sub> N N N N N N N N N N N N N N N N N N N

### 19. Compounds of the general formula D10

#### wherein

- R1, R2, R3 and R4 are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino;
- the heteroaromatic or heterocyclic residues are bound to the basic structure having the general formula D10 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D10 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof, for a use in the medical field.

20. The compounds of the general formula D10 according to claim 19 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D10 according to Table 10, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

# Table 10:

Compound	Structure
ID.	
D10.001	
D10.002	O N Br
D10.003	N N N CI
D10.004	

D10.005	
D10.007	
D10.008	N N H
D10.009	
D10.010	Br O O O O O O O O O O O O O O O O O O O

D10.011	
D10.012	
D10.013	Br O Br
D10.014	Br Br O
D10.015	N-N N N= Br
D10.016	

D10.017	9.
D10.018	Br
	N N N Br
D10.019	
	N N N N T T T T
D10.020	0-1
	N.N
	0,00
	0- N-0-
D10.021	
	CI N N N N N
	N Br
D10.022	s N N
	Br Ö

D10.023	
D10.025	N. N. N. S
D10.026	
D10.027	N-N-N
D10.028	

D10.029	ş
D10.030	
D10.031	N-N N
D10.032	
D10.033	N N N N N N N N N N N N N N N N N N N
D10.034	

D10.035	CI O N N O O O O O O O O O O O O O O O O
D10.036	7-9
	N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-
D10.037	
	N N N Br
D10.038	
	N J N N J N N N N N N N N N N N N N N N
D10.039	
	N. N
D10.040	O'N-OLN-N

D10.041	
	ON NO
	, o , o
D10.042	S
	N N N Br
	~~~~ l
	<b>L</b> 6
D10.043	0=N+0-
	N N N
D40.044	
D10.044	0 N N O -
D10.045	
D 10.040	O NO
	N 0-
	O N-N
D10.046	Br
D 10.040	l
	Br O L N
	Br O
	O Br

D10.047	
	N-N N-N
D10.049	
	0
D10.050	Br O N N O N O
D10.051	
D10.052	N-N OO
D10.053	N-N O-

D10.054	Br O Br
D10.055	F N N N
D10.056	
D10.057	S-N N CI
D10.058	F S N N
D10.060	Br N-N

D10.061	
D10.062	
D10.063	CI CI N
D10.065	Br O Br
D10.066	CI N N N N P
D10.067	Br O N N Br

D10.068	Br
D10.069	
D10.070	1
	N N N O Br
D10.071	
D10.072	
D10.073	

D10.074	0, /
	$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$
D10.075	
D10.076	1
:	N.N. N.N.
D10.077	
D10.078	F N N N N N N N N N N N N N N N N N N N

D10.079	0- 0/
	Br O N O
	Br Br
D10.081	V-
	N N
	ő
	CI
D10.082	1 0
	O Br
	N Br
D10.083	
	N N N N N N N N N N N N N N N N N N N
	N T O
D10.084	Br 1
	N Br O O
D10.085	0 0-

D10.086	O N N Br O O
D10.087	
D10.088	N-N N-0-
D10.089	N-NOO N=OBr
D10.090	O CI
D10.091	0 N 0 N − N = N

D10.092	
D10.093	F O O CI
D10.094	Br O Br
D10.095	O N-N Br
D10.097	
D10.098	N N N N O O

D10.099	N.N.N.N.
D10.100	
	N-N
D10.101	0
D10.102	Br N N Br
	o o o Br
D10.103	
	N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-N-
D10.105	O N N Br

D10.106	Br Br O
D10.107	
D10.108	0;N+0- N-N-N-N-N-0
D10.109	O Br Br O
D10.110	N—N—N—O—O S—Br
D10.111	0-N+ 0 0

D10.113	
D10.116	
D10.117	
D10.118	
D10.119	Br O N N O

D10.120	
	Br O Br
D10.121	Br N-N O
D10.122	CI N N N N
D10.123	
D10.124	
D10.125	

D10.126	N-N-N
D10.128	N-N-OO-
D10.129	
D10.130	
D10.131	

D10.132	
	N N N N N N N N N N N N N N N N N N N
D10.133	
D10.134	CI N N N N O
D10.135	Br N N N N N N N N N N N N N N N N N N N
D10.136	N.N.
D10.137	

D10.138	
D10.139	
D10.140	Br o o
D10.141	
D10.142	
D10.143	O CI N N N

## 21. Compounds of the general formula D11

#### wherein

- R1, R2 and R3 are selected from the groupconsisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino;
- the heteroaromatic or heterocyclic residues are bound to the basic structure having the general formula D11 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D11 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof, for a use in the medical field.

22. The compounds of the general formula D11 according to claim 21 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D11 according to Table 11, and tautomers, stereoisomers

of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 11:

Compound	Structure
ID.	
D11.001	
D11.002	

D44 002	
D11.003	N S
	0
	N O
	Br
D11.004	o`n o
D11.006	
D11.007	
D11.008	THE STATE OF THE S

D11.009	Me NH <sub>2</sub>
D11.010	O-N NH
D11.011	$\begin{array}{c} -O \\ O \\ N \end{array} \begin{array}{c} N \\ NH_2 \end{array}$

# 23. Compounds of the general formula D12

## wherein

- X and Z may be identically or different and independent of each other are selected from the group consisting of hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- bis C<sub>12</sub>-Alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several heteroatome from the group N, O, P and S and amino (NH2, NHR2, NR2R3);
- Y represents O, S or NR4;
- R1, R2, R3 and R4 may be identical or different and are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or

J

branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydr-oxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub>-Alkylthio unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino;

• the heteroaromatic or heterocyclic residues are bound to the basic structure having the general formula D12 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D12 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof, for a use in the medical field.

24. The compounds of the general formula D12 according to claim 23 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D12 according to Table 12, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 12:

Compound	Structure
ID.	
D12.001	

D12.002	
	ĵ
	\ N
	O N N N
	N N N N N N N N N N N N N N N N N N N
D12.003	cí ÇI
	\ <u>\</u>
	9 9
D12.004	/
	) <sub>1</sub>
	0=\ N =\
	CI CI
D12.006	
D12.000	N-
	N
D12.009	877
D 12.003	
	N N N Br

D12.010	
D12.012	
D12.013	N N N N
D12.014	
D12.016	

D12.017	0 $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$
D12.019	
	O <sub>≥N</sub> .o⁻
	N N N N N N N N N N N N N N N N N N N
D12.024	I N
	N N N O O O O O O O O O O O O O O O O O
D12.025	(°)
D12.027	Ĭ
	CI

D12.029	
D12.031	
D12.032	
D12.033	
D12.034	CI
D12.038	

D12.040	OH
	O N N O O O O O O O O O O O O O O O O O
D12.042	0 N-N N-N O Br
D12.043	Br O N
D12.045	N—N—N—O—O  S—Br
D12.047	Br O N O
D12.050	

# 25. Compounds of the general formula D13

#### wherein

- X and Z may be identical or different and independent of each other are selected from the group consisting of hydroxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S and amino (NH2, NHR2, NR2R3);
- Y represents O, S or NR5;
- the aromatic system may be a six-membered ring including a homo- or hetero aromatic system having one to four N atoms in the ring;
- R1 symbolizes the substitution of the aromatic core of the basic structure and may represent up to five substituents;
- R1, R2, R3 and R4 may be identical or different and are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydr-oxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino;
- the heteroaromatic or heterocyclic residues are bound to the basic structure having the general formula D13 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D13 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereo-isomers thereof, for a use in the medical field.

26. The compounds of the general formula D13 according to claim 25 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D13 according to Table 13, and tautomers, stereoisomers of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 13:

Compound	Structure
ID.	
D13.001	
D13.002	NH <sub>2</sub> O
D13.003	NH <sub>2</sub> O H

D13.004	
D13.005	CI NH <sub>2</sub> O
D13.006	NH <sub>2</sub> O
D13.007	CI

## 27. Compounds of the general formulae D14

## wherein

- Y represents O, S or NR5;
- R1, R2, R3 and R4 may be identical or different and are selected from the group consisting of hydrogen, unsubstituted or substituted, straight chain or branched C<sub>1</sub>- to C<sub>12</sub> alkyl, C<sub>2</sub>- to C<sub>12</sub> alkenyl and C<sub>2</sub>- to C<sub>12</sub> alkynyl, hydr-oxy, thiol, C<sub>1</sub>- to C<sub>12</sub> alkoxy, C<sub>1</sub>- to C<sub>12</sub> alkylthio, unsubstituted or substituted, uncondensed or condensed aryl and cycloalkyl optionally containing one or several hetero atoms from the group N, O, P and S, unsubstituted or substituted amino, unsubstituted or substituted carbonyl, unsubstituted or substituted thiocarbonyl and unsubstituted or substituted imino; and
- the heteroaromatic or heterocyclic residues are bound to the basic structure having the general formula D14 via a C atom or a hetero atom;

and tautomers, stereoisomers of the compounds of the general formula D14 and pharmaceutically acceptable salts, salt derivatives, tautomers and stereo-isomers thereof, for a use in the medical field.

28. The compounds of the general formula D14 according to claim 27 for a use in the medical field, namely compounds for example, but not exclusively, selected from the following group D14 according to Table 14, and tautomers, stereoisomers

of said compounds and pharmaceutically acceptable salts, salt derivatives, tautomers and stereoisomers thereof:

Table 14:

Compound	Structure
ID.	
D14.001	NH O
D14.002	
D14.003	H OH
D14.004	CI CI CI CI
D14.005	H OH

- 29. A pharmaceutical composition, comprising at least one compound of any of the preceding claims 1 to 28, optionally in combination with usual carriers and/or adjuvants.
- 30. A cosmetic composition, comprising at least one compound of any of the preceding claims 1 to 28, optionally in combination with usual carriers and/or adjuvants.
- 31. Use of at least one compound or of a pharmaceutical or cosmetic composition according to any of the preceding claims 1 to 30 for inhibiting the activity of dipeptidyl peptidase IV or of analogous enzymes alone or in combination with inhibitors of the alanyl aminopeptidase or of analogous enzymes.
- 32. Use of at least one compound or of a pharmaceutical or cosmetic composition according to any of the preceding claims 1 to 30 for topically influencing the

activity of dipeptidyl peptidase IV or of analogous enzymes alone or in combination with inhibitors of the alanyl aminopeptidase or of analogous enzymes.

- 33. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of multiple sclerosis, Morbus Crohn, Colitis ulcerosa and other autoimmune diseases as well as of inflammatory diseases.
- 34. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of allergic asthma bronchiale and other allergic diseases.
- 35. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of a rejection of transplanted tissues and cells.
- 36. Use of at least one compound or of a pharmaceutical or cosmetic composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of skin and mucosa diseases as, for example, psoriasis, acne as well as of dermatologic diseases associated with a hyperproliferation and changed differentiation states of fibroblasts, preferably of benign fibrosing and sclerosing skin diseases and malign fibroblastar hyperproliferation states.
- 37. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of acute neuronal diseases, in particular ischemia-caused cerebral damages after a ischemic or hemorrhagic stroke, craniocerebral trauma, cardiac arrest, myocardial infarct or as a consequence of heart surgery.

- 38. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of chronic neuronal diseases, in particular Morbus Alzheimer, Pick's disease, of the Progressive Supranuclear Palsy, of a corticobasal degeneration, of the fronto-temporal dementia, of Morbus Parkinson, in particular of Morbus Parkinson coupled to chromosome 17, of Morbus Huntington, of prion-caused diseases and of the amyotrophic lateral sclerosis.
- 39. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of atherosclerosis, arterial inflammation, vasculitides as well as stent restenosis, also in the form of medicament-coated stents, for example after a percutaneous transluminal angioplasty, and reperfusion syndrome.
- 40. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of inflammation reactions at, or caused by, medical-technical devices implanted into the organism (medical devices).
- 41. Use according to claim 40 in the form of a coating or a layer on the devices or a substance admixture of at least one of the compounds or compositions to the material of the devices or in the form of a local or systemic administration either successively or parallel in time.
- 42. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of chronic obstructive pulmonal diseases (Chronische Obstruktive Lungenerkrankungen; COPD).

- 43. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of prostata carcinoma and other tumors as well as of metastases.
- 44. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of the Heavy Acute Respiratory Syndrome (Schweres Akutes Respiratorisches Syndrom; SARS).
- 45. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for a prophylaxis and therapy of sepsis and sepsis-like conditions.
- 46. Use of at least one compound or of a pharmaceutical or cosmetic composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for inhibiting the activity of dipeptidyl peptidase IV or of analogous enzymes alone or in combination with inhibitors of the alanyl aminopeptidase or of analogous enzymes.
- 47. Use of at least one compound or of a pharmaceutical or cosmetic composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for topically influencing the activity of dipeptidyl peptidase IV or of analogous enzymes alone or in combination with inhibitors of the alanyl aminopeptidase or of analogous enzymes.
- 48. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of multiple sclerosis, Morbus Crohn, Colitis ulcerosa and other autoimmune diseases as well as of inflammatory diseases.

- 49. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of allergic asthma bronchiale and other allergic diseases.
- 50. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of a rejection of transplanted tissues and cells.
- 51. Use of at least one compound or of a pharmaceutical or cosmetic composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of skin and mucosa diseases as, for example, psoriasis, acne as well as of dermatologic diseases associated with a hyperproliferation and changed differentiation states of fibroblasts, preferably of benign fibrosing and sclerosing skin diseases and malign fibroblastar hyperproliferation states.
- 52. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of acute neuronal diseases, in particular ischemiacaused cerebral damages after a ischemic or hemorrhagic stroke, craniocerebral trauma, cardiac arrest, myocardial infarct or as a consequence of heart surgery.
- 53. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of chronic neuronal diseases, in particular Morbus Alzheimer, Pick's disease, of the Progressive Supranuclear Palsy, of a corticobasal degeneration, of the frontotemporal dementia, of Morbus Parkinson,



in particular of Morbus Parkinson coupled to chromosome 17, of Morbus Huntington, of prion-caused diseases and of the amyotrophic lateral sclerosis.

- 54. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of atherosclerosis, arterial inflammation, vasculitides as well as stent restenosis, also in the form of medicament-coated stents, for example after a percutaneous transluminal angioplasty, and reperfusion syndrome.
- 55. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of inflammation reactions at, or caused by, medical-technical devices implanted into the organism (medical devices).
- 56. Use according to claim 55 in the form of a coating or a layer on the devices or a substance admixture of at least one of the compounds or compositions to the material of the devices or in the form of a local or systemic administration either successively or parallel in time.
- 57. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of chronic obstructive pulmonal diseases (Chronische Obstruktive Lungenerkrankungen; COPD).
- 58. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of prostata carcinoma and other tumors as well as of metastases.

- 59. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of the Heavy Acute Respiratory Syndrome (Schweres Akutes Respiratorisches Syndrom; SARS).
- 60. Use of at least one compound or of a pharmaceutical composition according to any of the preceding claims 1 to 30 for manufacturing a medicament for a prophylaxis and therapy of sepsis and sepsis-like conditions.
- 61. A process for inhibiting the activity of alanyl aminopeptidases or of analogous enzymes alone or in combination with inhibitors of dipeptidyl peptidase IV or of analogous enzymes by an administration of at least one compound of pharmaceutical or cosmetic composition according to any of the preceding claims 1 to 30 in an amount required for an inhibition of the enzyme activity.
- 62. A process for topically influencing the activity of alanyl aminopeptidases or of analogous enzymes alone or in combination with inhibitors of dipeptidyl peptidase IV or of analogous enzymes by an administration of at least one compound or pharmaceutical or cosmetic composition according to any of the preceding claims 1 to 30 in an amount required for influencing the enzyme activity.
- 63. A process for a prophylaxis and therapy of multiple sclerosis, Morbus Crohn, Colitis ulcerosa and other autoimmune diseases as well as of inflammatory diseases by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.
- 64. A process for a prophylaxis and therapy of asthma bronchiale and other allergic diseases by an administration of at least one compound or pharmaceutical

composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.

- 65. A process for a prophylaxis and therapy of a rejection of transplanted tissues and cells as, for example, allogenic kidney or stem cell transplantation by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.
- 66. A process for a prophylaxis and therapy of skin and mucosa diseases as, for example, psoriasis, acne as well as of dermatologic diseases associated with a hyperproliferation and changed differentiation states of fibroblasts, of benign fibrosing and sclerosing skin diseases and malign fibroblastar hyperproliferation states by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.
- 67. A process for a prophylaxis and therapy of acute neuronal diseases, in particular ischemia-caused cerebral damages after a ischemic or hemorrhagic stroke, craniocerebral trauma, cardiac arrest, myocardial infarct or as a consequence of heart surgery by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.
- 68. A process for a prophylaxis and therapy of chronic neuronal diseases, in particular Morbus Alzheimer, Pick's disease, of the Progressive Supranuclear Palsy, of a corticobasal degeneration, of the frontotemporal dementia, of Morbus Parkinson, in particular of Morbus Parkinson coupled to chromosome 17, of Morbus Huntington, of prion-caused diseases and of the amyotrophic lateral sclerosis by an administration of at least one compound or pharmaceuti-

cal composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.

- 69. A process for a prophylaxis and therapy of atherosclerosis, arterial inflammation, stent restenosis, also in the form of medicament-coated stents, for example after a percutaneous transluminal angioplasty, and reperfusion syndrome by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.
- 70. A process for a prophylaxis and therapy of inflammation reactions at, or caused by, medical-technical devices implanted into the organism (medical devices) by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.
- 71. The process according to claim 70, wherein the administration is effected in the form of a local or systemic administration, either successively or parallel in time, of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30.
- 72. A process according to claim 70, wherein the administration is effected by the application of a coating or layer, on the devices, of at least one compound or composition according to any of the preceding claims 1 to 30 or of a substance admixture of at least one compound or composition according to any of the preceding claims 1 to 30 to the material of the devices.
- 73. A process for a prophylaxis and therapy of chronic obstructive pulmonal diseases (Chronische Obstruktive Lungenerkrankungen; COPD) by an administration of at least one compound or pharmaceutical composition according to

any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.

- 74. A process for a prophylaxis and therapy of prostata carcinoma and other tumors as well as of metastases by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.
- 75. A process for a prophylaxis and therapy of the Heavy Acute Respiratory Syndrome (Schweres Akutes Respiratorisches Syndrom; SARS) by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.
- 76. A process for a prophylaxis and therapy of sepsis and sepsis-like conditions by an administration of at least one compound or pharmaceutical composition according to any of the preceding claims 1 to 30 in an amount required for a prophylactic or therapeutic treatment.